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ABSTRACT

In spring 1988, a telephone survey was conducted of students who had been enrolled in Howard Community College's (HCC's) Biomedical Engineering Technology (BMET) program between 1972 and 1987. The study sought to gather information for future student recruitment and program planning efforts. Responses were obtained from 43 (35%) of a potential pool of 124 former BMET students. Study findings included the following: (1) 93% of the respondents were employed full time, and, of these, 82% were working in jobs related to BMET; (2) 43% began their first job while enrolled at HCC, 28% found their jobs within 5 weeks of leaving school, and 29% took 8 weeks or longer to find their first job; (3) 21% found out about their jobs through friends or relatives; (4) 60% had starting salaries of $16,000 or more in their first BMET job, and, at the time of the survey, 54% were earning $26,000 or more; (5) 72% of the respondents had no electronics background before entering the BMET program; (6) 12% had been enrolled in high school vocational or technical programs; (7) HCC's location was the most important draw for many of the students; (8) 88% described the BMET program as excellent (37%) or good (51%); and (9) 90% said that HCC's training was adequate to prepare them for their job. (AJL)

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Howard Community College

REPORT ON THE RESULTS OF THE 1988 SURVEY OF FORMER BIOMEDICAL ENGINEERING TECHNOLOGY STUDENTS

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RESEARCH REPORT NUMBER 56
JANUARY 1989

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HOWARD COMMUNITY COLLEGE

REPORT ON THE RESULTS OF THE 1988 SURVEY OF FORMER BIOMEDICAL ENGINEERING TECHNOLOGY STUDENTS

RESEARCH REPORT NUMBER 56

JANUARY 1989

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HOWARD COMMUNITY COLLEGE

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REPORT ON THE RESULTS OF THE 1988 SURVEY OF FORMER BMET STUDENTS

In the spring of 1988, a telephone survey was conducted of former students in Howard Community College's Biomedical Engineering Technology Program. From a potential pool of 124, there were 43 former BMET students who were contacted and who agreed to answer the survey questions, for a response rate of 35%. Changes in addresses and telephone numbers caused the most difficulty in reaching former students. There were very few who, once contacted, refused to answer the survey.

This report presents the results of the survey. It is hoped that this information will be of value in future program recruitment and planning.

Table One gives employment information on respondents to the BMET survey. Among its highlights are:

- The vast majority (93%) of the respondents were employed full-time.
- Forty-three percent had their first BMET job while attending HCC. Another 28% had their jobs within five weeks of leaving HCC, and for 29% it took eight weeks or more to find their first job.
- The most popular method of finding out about jobs was friends and relatives - used by 21%. HCC course activities and help from faculty/staff gave 34% leads to their jobs (17% each). Newspaper advertisements assisted 12%, while the others were helped in a variety of ways.
- Eighty-two percent of the respondents said that their jobs were related to BMET.
- Only one respondent reported working part-time. While 63% said that they worked an average of 40 hours a week, 35% worked more than that, with 20% of that number working an average of 50 or more hours a week.
- Slightly more than half the respondents had had more than one job since leaving HCC.
- Of those who had had more than one job, 59% left their last job for a "better" job.

TABLE ONE. EMPLOYMENT INFORMATION ON RESPONDENTS TO THE BMET SURVEY

Employment Item	Number	Percent
• Employment Status:		
Employed Full-time	40	93%
Employed Part-time	1	2
Not employed	2	5
• Time to find first BMET job after leaving HCC:		
Had job while attending HCC	18	43%
Got job at/by graduation	6	14
Two - five weeks	6	14
Eight - twelve weeks	5	12
Sixteen or more weeks	7	17
• Method of finding out about job:		
Friend/relative	9	21%
HCC faculty/staff	7	17
HCC course activity	7	17
Newspaper ad	5	12
HCC Bulletin Board	3	7
Personal, direct inquiry	3	7
Professional contact	2	5
Employment service	1	2
Other	5	12
• Present job related to BMET:		
Yes	32	82%
No	7	18
• Average hours worked per week:		
20 hours	1	2%
40 hours	25	63
41 - 49 hours	6	15
50 or more hours	8	20
• Jobs since leaving HCC:		
In first job	20	47%
One other job	12	29
Two or three other jobs	9	22
Four or more other jobs	1	2
• Reasons for leaving last job:		
Left for a better job	13	59%
Job was unrelated to BMET	2	9
Quit	2	9
Other	5	23

One of the prime attractions of the BMET field is the relatively good salaries. Respondents were asked about their first and present BMET salaries. These salaries and the differences between them are presented in Table Two A. Note that the figures presented were run for all those who currently work 40 or more hours a week. Some of the respondents may have started in part-time jobs, so the salary difference for those individuals may be exaggerated. It should be remembered also that some of the former students' last enrollment dates were as long ago as 1972. The table shows:

- Sixty percent of the former students contacted had starting salaries of $16,000 or more in their first BMET job. The average starting salary for first BMET jobs was $15,524.

- Present BMET salaries were all over $15,000, with 54% earning $26,000 or more. The average current salary is $28,666.

- The differences between starting and present salaries ranged from $2000 to over $21,000, with an average difference of $13,152.

Table Two B shows the average current salary by the year the former student left HCC. Indications from the table are:

- Although there are some exceptions, there is a general progression in salaries from the most recent BMET students to the earliest ones. The three respondents who left in 1975 or earlier are making $35,000 or more, while those who left between 1983 and 1987 are making between $22,524 and $25,000.

- A frequency check of all current salaries reveals that eight respondents are making $35,000 or more, with one each making $40,000, $50,000, and $62,000. These higher salaries may help to explain why the average figures for some of the years shown in the table make unexpected jumps instead of following the general progression by year.

TABLE TWO A. SALARIES OF RESPONDENTS' FIRST AND PRESENT BMET JOBS

Salary Data	Number	Percent
• Starting salary in first BMET job:		
$6000 - 10000	7	20%
$11000 - 15000	7	20
$16000 - 20000	18	51
$21000 or more	3	9
Mean starting salary: $15524		
• Present Salary:		
$15000 - 20000	4	11%
$21000 - 25000	12	34
$26000 - 30000	8	23
$31000 - 35000	6	17
$36000 or more	5	14
Mean present salary: $28,666		
• Difference between starting and present salaries:		
$2000 - 5000	7	19%
$6000 - 10000	12	33
$11000 - 15000	5	14
$16000 - 20000	5	14
$21000 or more	7	19
Mean difference in salaries: $13,152		

TABLE TWO B. FORMER BMET STUDENTS' AVERAGE SALARIES BY YEAR THEY LEFT HCC

YEAR LEFT HCC	NUMBER	FIRST SALARY	CURRENT SALARY	DIFFERENCE
72	1	7200	35000	27800
75	2	13400	35500	22100
78	3	13100	33667	20733
79	1	15000	28000	13000
80	5	15000	37750	21800
81	3	17267	39400	22133
82	1	18000	28000	10000
83	3	13667	23167	9500
84	2	17500	25000	7500
85	7	16786	24429	7643
86	4	16250	23250	7000
87	5	16848	22524	4676

Table Three gives information about the non-HCC training experiences of former BMET students. It shows that:

- Most (72%) of the students had no electronics background before entering the BMET program.
- Relatively few (12%) came from high school vocational or technical programs.
- As many as three-quarters of the respondents had had some further BMET training since leaving HCC. Company training programs (30%), returning to HCC (27%), and going to four year institutions (23%) were the most common forms of training.
- Although 32 respondents said they had had training, only 26 reported on its relatedness to BMET. Seventy-three percent of that number said their training was related to BMET.

TABLE THREE. TRAINING EXPERIENCES OF FORMER BMET STUDENTS BEFORE AND AFTER HCC ATTENDANCE

Survey Item	Number	Percent
• Electronics background before BMET program:		
None	31	72%
High School program	4	9
Employed in electronics field	2	5
Other	6	14
• Type of High School program:		
College preparatory	19	45%
General	17	40
Vocational/Technical	5	12
Other	1	2
• Training since HCC:		
Yes, still attending part-time	17	40%
Yes, no longer attending	15	35
No training	11	25
• Type of training:		
Company training program	9	30%
Howard Community College	8	27
Four year college/graduate school	7	23
Manufacturer's school	4	13
Other	2	7
• Training related to BMET:		
Yes	19	73%
No	7	27

During the course of the survey, respondents gave their assessments of the HCC BMET program, told their reasons for choosing a BMET career, and gave suggestions about the program. Table Four presents their ratings and opinions.

- HCC's staff and friends/relatives of the students were equally successful in recruiting students for the BMET program, with each accounting for 28% of the respondents.

- When asked their reasons for choosing a BMET career, survey respondents gave a variety of answers. Chief among them was the fact that BMET was related to the health care field. The enjoyable and challenging work in BMET was more often listed as a reason for choosing it than was the promise of a good salary.

- The location of HCC was the most important draw for many of the former BMET students. The cost of the program was also important in choosing HCC instead of a private technical school. The fact that HCC was the only school with the program and the recommendation of a friend or associate were also fairly strong reasons.

- Students gave general ratings of HCC's BMET program and 88% of them described it as excellent (37%) or good (51%).

- As many as 90% of the respondents said that HCC's training was adequate to prepare them for their job.

- Fully 95% would recommend the BMET program to a friend or relative.

- Informing high school students about the BMET program was offered as a suggestion for interesting others by half of the respondents - 31% said through presentations and 19% said to use the high school counselors and faculty.

- Former BMET students had suggestions for groups to target as possible BMET recruits: high school students and recent graduates lead the list, with military veterans next.

- On the whole, the former BMET students who were contacted by phone were positive and enthusiastic about the program. Sixty percent said they were interested in telling prospective students about the program, with another 14% saying that they might be willing to do it.

TABLE FOUR. RESPONDENTS' EXPERIENCES AND ASSESSMENTS OF THE HCC BMET PROGRAM

Survey Item	Number	Percent
• How did you learn about HCC's BMET program:		
HCC faculty/staff	12	28%
Friend/relative	12	28
Information mailed to your home	6	14
Newspaper article	2	5
Other	11	25
• Reason for choosing a BMET career:*		
Related to health care field	17	24%
Enjoyable work	12	17
Challenging field	9	13
Good salary	8	11
Opportunity for advancement	5	7
Other	19	27
• Reason for choosing HCC instead of a private school:*		
Location	22	32%
Cost	13	19
Only HCC had BMET program	7	10
Recommendation of friend, professional associate	7	10
Length of program	6	9
Quality of HCC faculty	5	7
Other	8	12
• General rating of HCC's BMET program:		
Excellent	16	37%
Good	22	51
Fair	3	7
Poor	2	5
• Was HCC's training adequate to prepare you for job:		
Yes	30	77%
Yes, with conditions	5	13
No	4	10
• Would you recommend program to friend or relative:		
Yes	38	90
Yes, with conditions	2	5
No	2	5
• Suggestions for interesting others in program:*		
Presentations at voc tech/high schools	28	35%
Use high school counselors/faculty	15	19
Have graduates spread word	8	10
Radio/tv ads	7	9
Newspaper articles	7	9
Mail program information to homes	4	5
Other	11	14
• Suggested groups to target for BMET program:*		
High school students/recent graduates	37	47%
Former military	14	18
Medical technicians	5	6
Those with electronics background	4	5
Health care workers	3	4
Mechanics/Repairers	2	2
Other	14	18
• Interested in telling prospective students about program:		
Yes	26	60%
Maybe	6	14
No	11	26

*Respondents could give more than one answer on these survey items. Percentages are figured on the total number of responses given to the item rather than on the number of respondents.

HOWARD COMMUNITY COLLEGE
List of Most Recent Research Publications

Novak, Virginia E. and Radcliffe, Susan K. ENROLLMENT PROJECTIONS REPORT. Report No. 55, December 1988.

Livieratos, Barbara B. REPORT ON THE RESULTS OF THE 1988 SURVEY OF TELECOURSE STUDENTS. Report No. 54. Howard Community College, August 1988.

Livieratos, Barbara B. THE SURVEY OF EMPLOYERS OF 1986 HOWARD COMMUNITY COLLEGE GRADUATES: A REPORT OF THE FINDINGS. Report No. 53. Howard Community College, July 1988.

Novak, Virginia E. FOLLOW-UP OF 1986 GRADUATES. Report No. 52. Howard Community College, May 1988.

Monroe, Charlotte A., Novak, Virginia E., and Radcliffe, Susan K. HOWARD COMMUNITY COLLEGE 1988-1989 INSTITUTIONAL INDICATORS FOR PROPOSED OPERATING BUDGET. Report Number 51. Howard Community College, April 1988. ERIC Publication Number ED 292 525.*

Livieratos, Barbara B. HIGHLIGHTS OF THE SURVEY OF EMPLOYERS OF 1985 HOWARD COMMUNITY COLLEGE GRADUATES. Report Number 50. Howard Community College, February 1988. ERIC Publication Number ED 292 488.*

Livieratos, Barbara B. FINDINGS FROM THE SURVEY OF EMPLOYERS OF 1984 HCC GRADUATES. Report No. 49. Howard Community College, December 1987.

Novak, Virginia E. and Radcliffe, Susan K. ENROLLMENT PROJECTIONS REPORT. Report No. 48. Howard Community College, December 1987.

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Office of Research and Personnel, FTE ENROLLMENT TRENDS FY84 - FY87. Flash Facts Vol. III, Number 1. Howard Community College, August 1987.

Office of Research and Personnel, HCC STUDENT POPULATION OF HOWARD COUNTY RESIDENTS FOR 1986-87 BY COUNCIL DISTRICT. Flash Facts Vol. II, Number 3. Howard Community College, June 1987.

Monroe, Charlotte A., Novak, Virginia E., and Radcliffe, Susan K. HOWARD COMMUNITY COLLEGE 1987-1988 INSTITUTIONAL INDICATORS FOR PROPOSED OPERATING BUDGET. Report No. 46. Howard Community College, April 1987.

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